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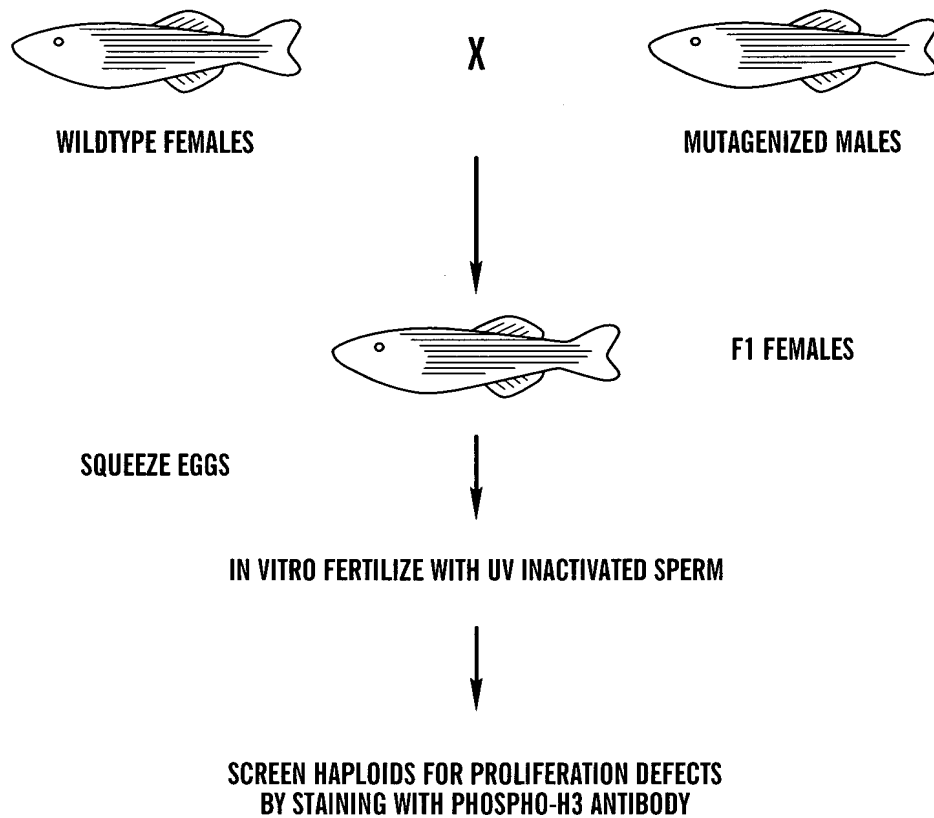
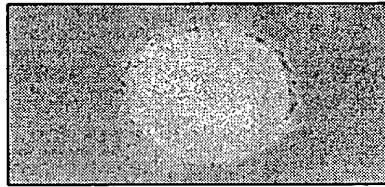


FIG. 1

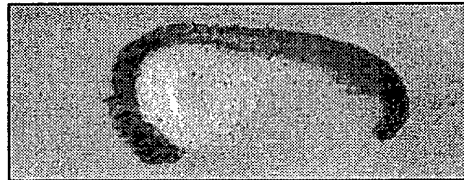
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12 HPF

FIG. 2A



16 HPF

FIG. 2B



24 HPF

FIG. 2C

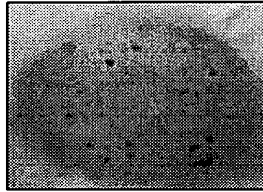


48 HPF

FIG. 2D

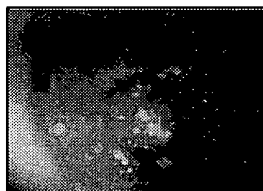
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H3 ANTIBODY 24 HPF

FIG. 3A

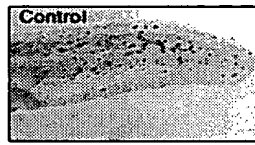


ACRIDINE ORANGE 24 HPF

FIG. 3B

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CONTROL

FIG. 4A



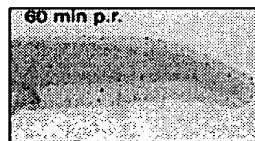
15 MIN POST-RADIATION

FIG. 4B



30 MIN POST-RADIATION

FIG. 4C



60 MIN POST-RADIATION

FIG. 4D



120 MIN POST-RADIATION

FIG. 4E



300 MIN POST-RADIATION

FIG. 4F

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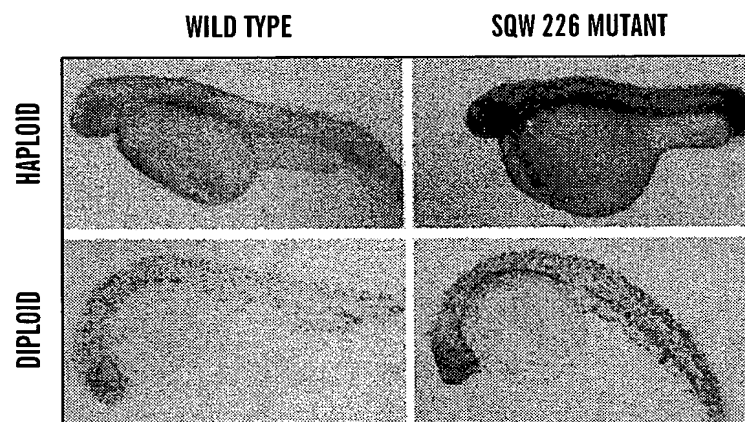


FIG. 5A

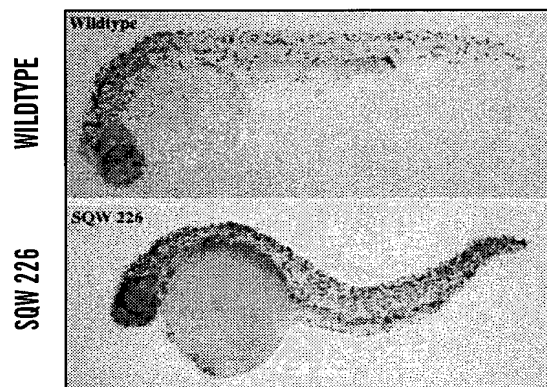


FIG. 5B

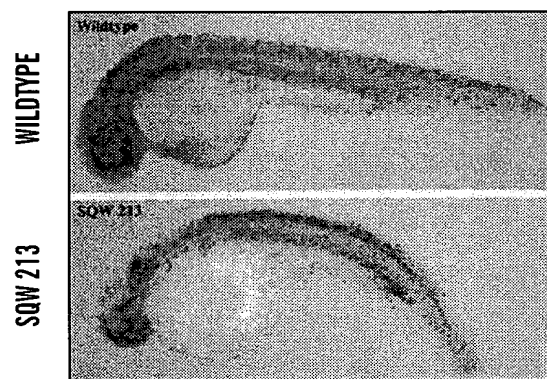


FIG. 5C

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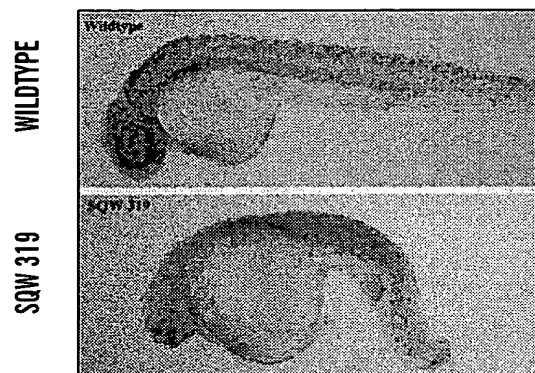


FIG. 5D

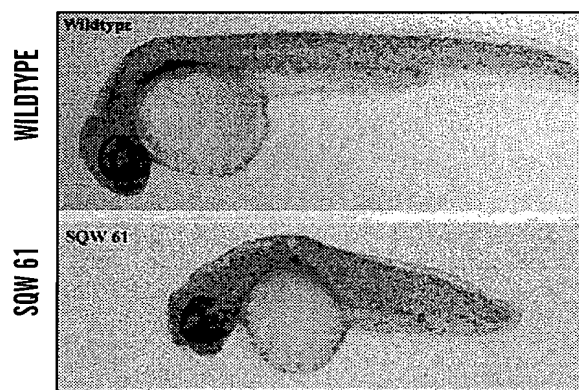


FIG. 5E

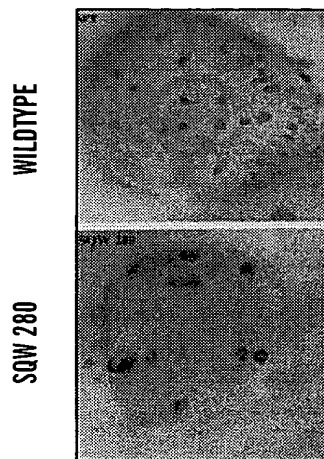


FIG. 5F

0953007 0610 2005 260

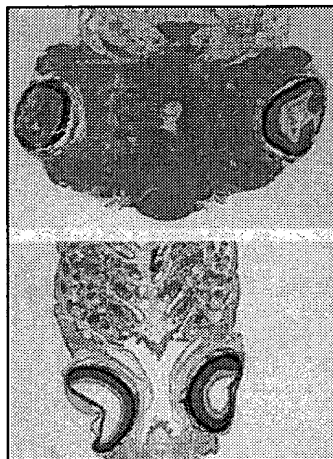


FIG. 6A

ZEBRAFISH

HUMAN

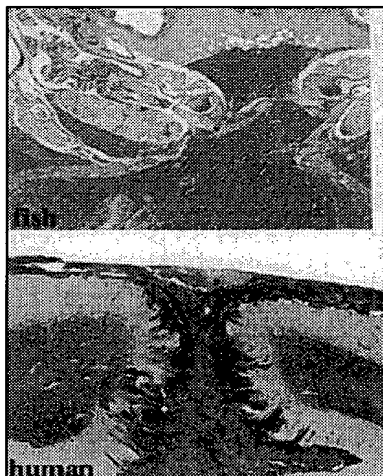


FIG. 6B

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ZEBRAFISH

HUMAN

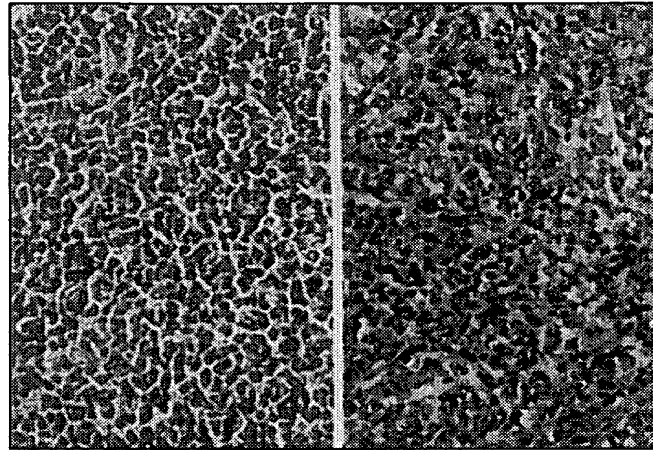


FIG. 6C

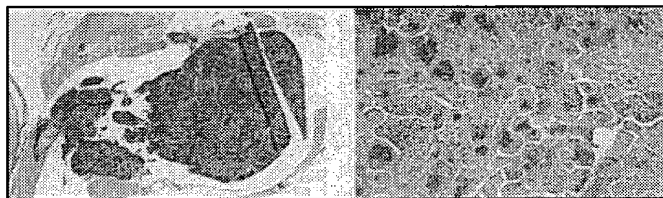
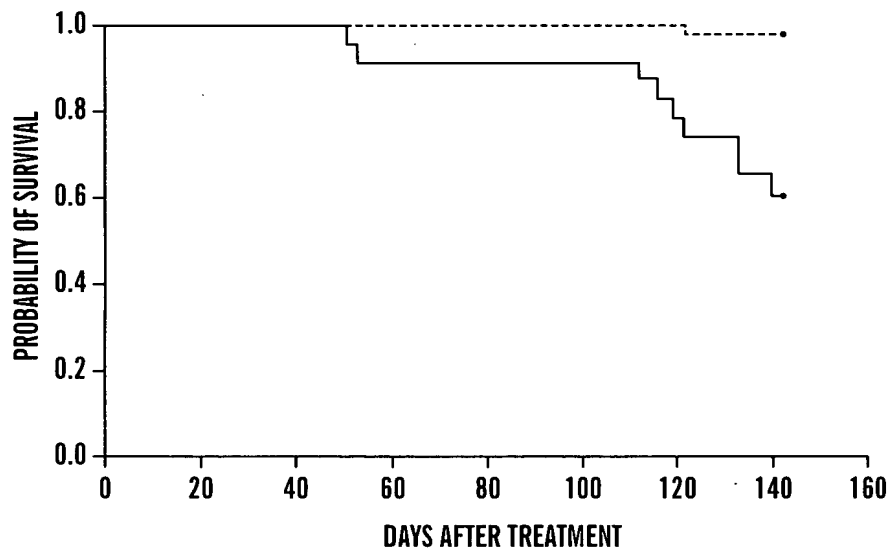


FIG. 6D

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**FIG. 6E**

SINGLE-EMBRYO FACS ANALYSIS

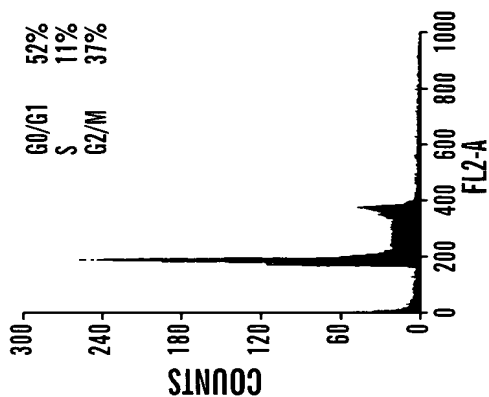


FIG. 7A

FACS ANALYSIS OF EMBRYOS AFTER IONIZING RADIATION

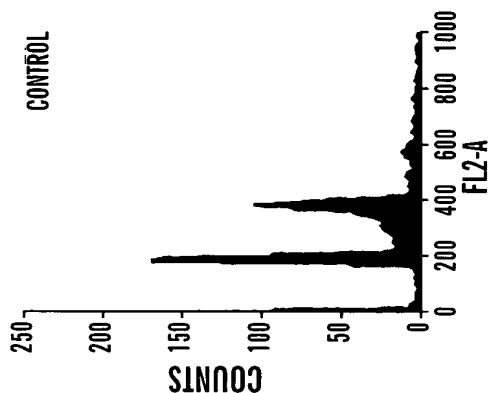


FIG. 7B

FACS ANALYSIS OF EMBRYOS AFTER IONIZING RADIATION

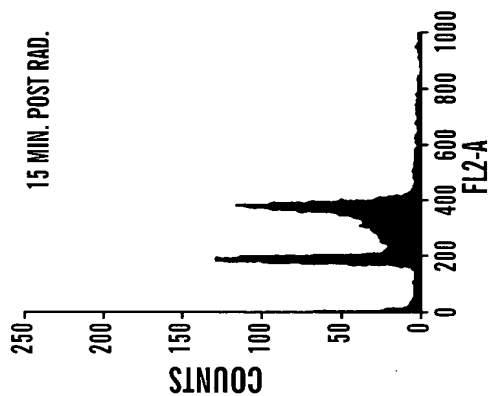


FIG. 7C

FACS ANALYSIS OF EMBRYOS AFTER IONIZING RADIATION

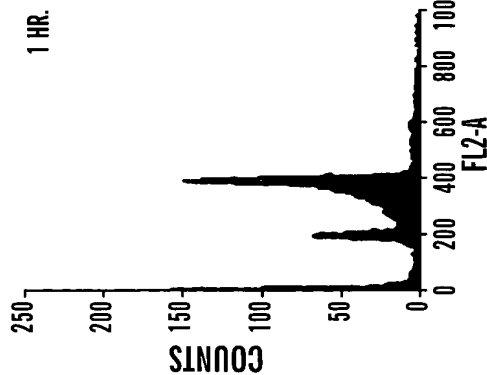


FIG. 7D

FACS ANALYSIS OF EMBRYOS AFTER IONIZING RADIATION

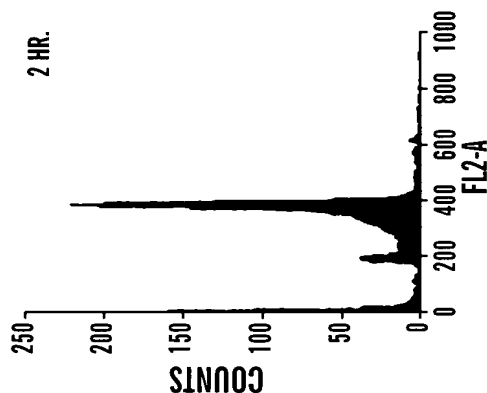


FIG. 7E

FACS ANALYSIS OF EMBRYOS AFTER IONIZING RADIATION

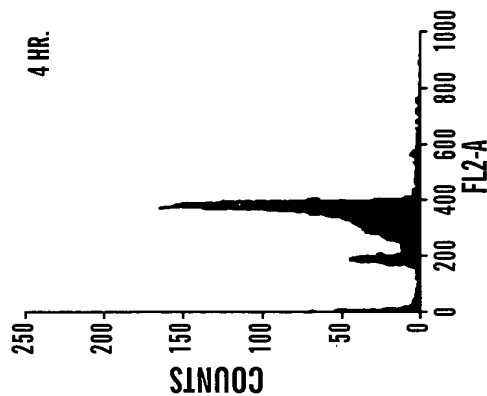


FIG. 7F

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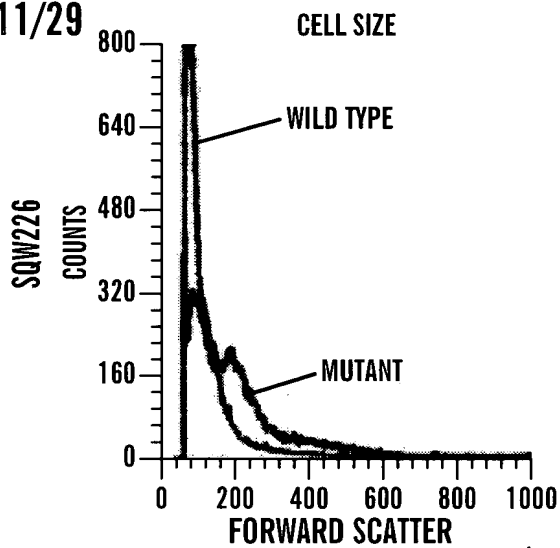


FIG. 7G

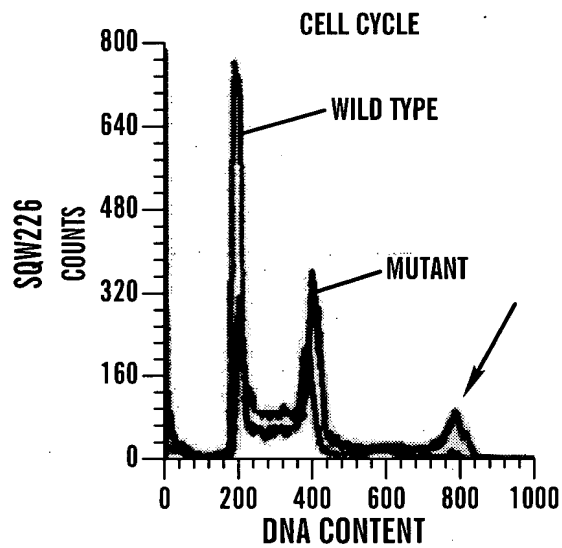


FIG. 7J

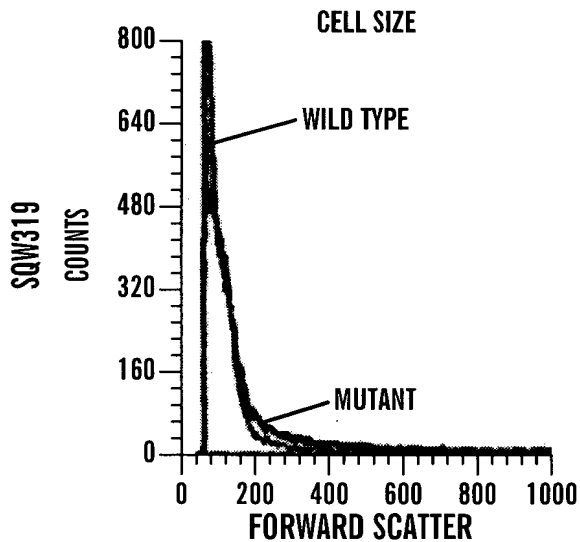


FIG. 7H

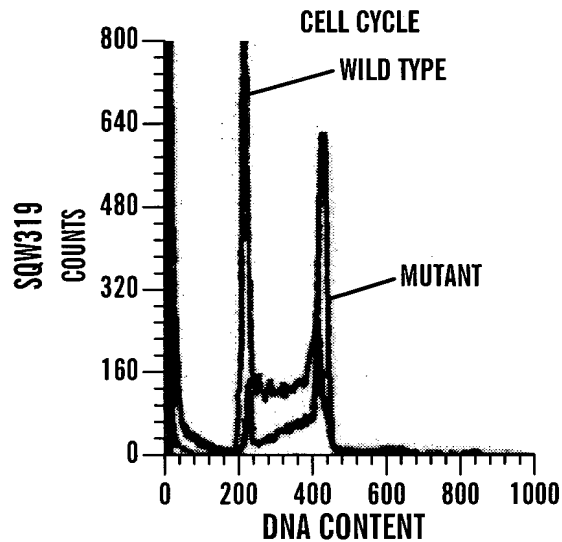


FIG. 7K

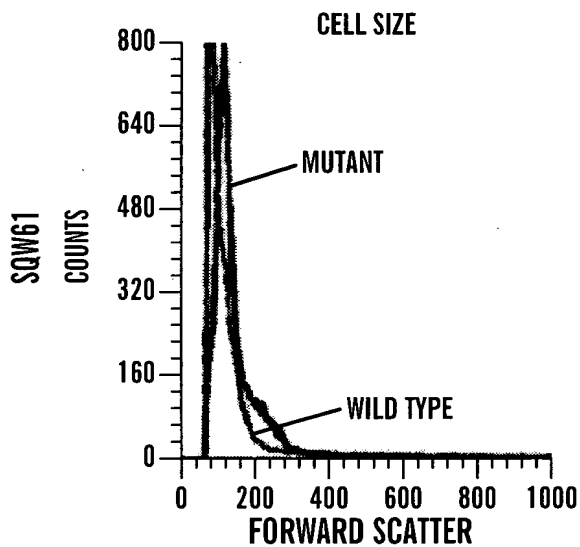


FIG. 7I

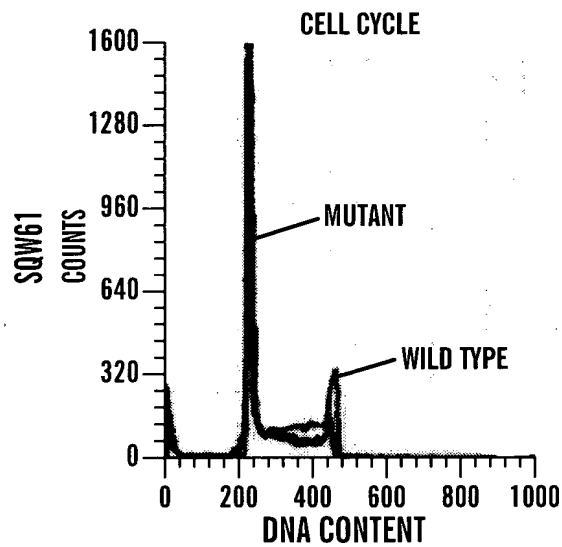


FIG. 7L

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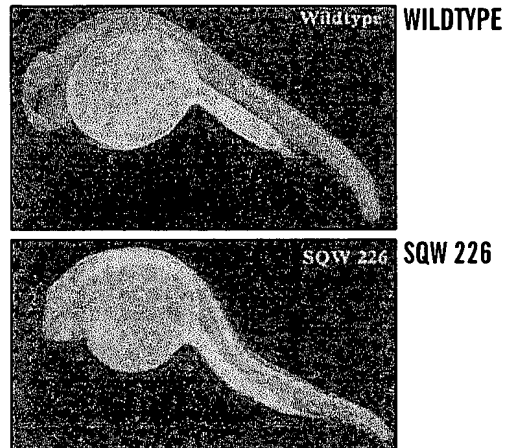


FIG. 8A

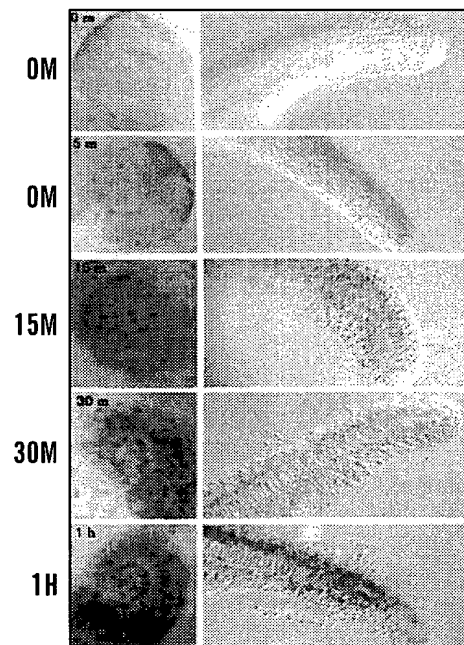


FIG. 8B

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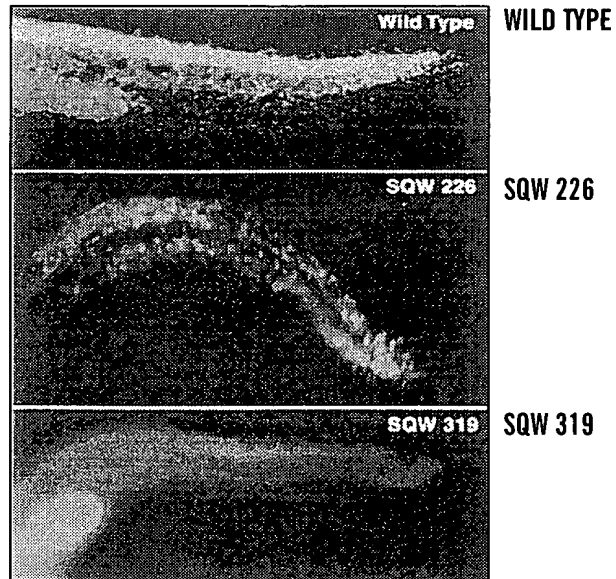


FIG. 8C

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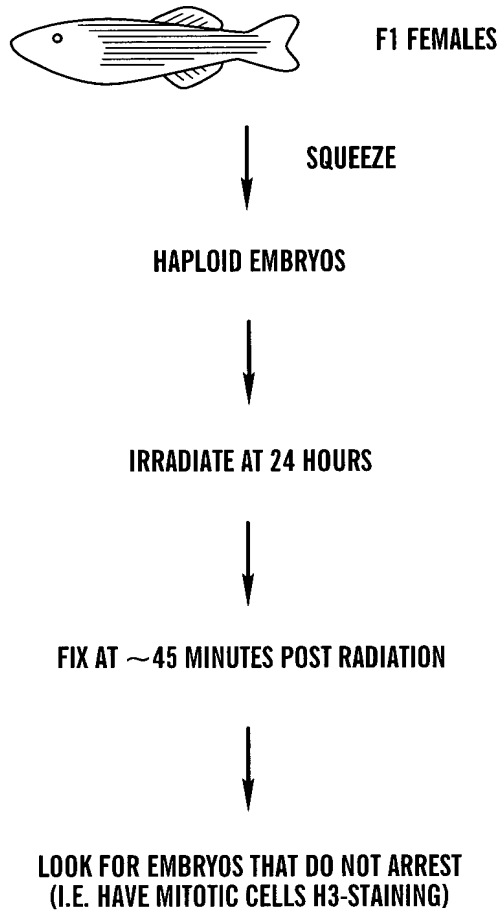


FIG. 9

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WT
NON-IRRADIATED

WT
IRRADIATED

SQW 226
IRRADIATED

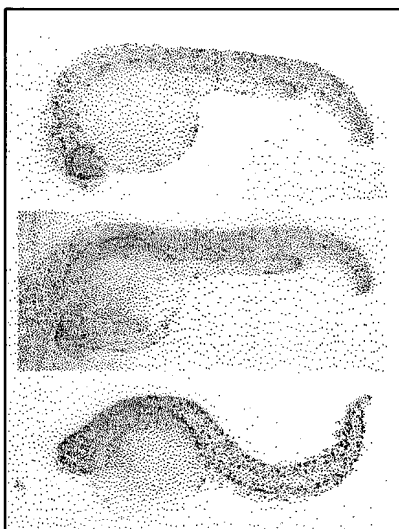


FIG. 10

Zfish MPPK--KRSSGT PQQKELK GSKLSRSPDSGN-----AVLSPERHKDKQPEFVFLSEELQSTNSICDHWRIWER 68
 Frog MPPKSPRK---QQIRSQGEPRSPDRP-----DFQDPDENFLCENLKISDNVRGKAWNTYEK 53
 Human MPPKT PRKTAATAAAAAAEPAPPPPPPEEDPEQSGPEDLPLVRLFEETEEDTALCQKLKIPDHWRRERAWLTWEK 80

Zfish EIRSMOK-TNMPYSNRQWGACLFIAGMELEGINLFTQFLKAVGLSVKQFISLVRKMDVNVDTISPKVNSAVTRLENKY 147
 Frog MFPSGYMMRE-TAKKESLGLCLYIASVDCEEMTFTFTELLKILRLSVNRCFRLREMDINMDVLSNKVDNAISKKKKY 132
 Human VSSVDGVLGGYIQKKKELKICIFIAVDLDEMSTFTTELQKNIEISVHKFFNLKEIDT-----STKVDNAMSPLKKY 155

Zfish DVTLAIYQRFYKTCCKTFAEPDNA-----KRKELWESSWTMFLAKCTFLOMEDLVISFQLLCVLEFFAKRLSPSL 220
 Frog ENMCLLFQKFQRTFELFEFEQHNT---RAAVDTAPILKGTMITFLLARCKILOMDELVISSQLLCVLDYFIKLSPPSI 209
 Human DVLFAIFSKLERTICELLYLTQPS-SISTEINSALVLKVSITFLLAKCEVLQMEDLVISFQMLCVLDYFIKLSPPML 234

Zfish LQSPYNSVSVSSSTLSPPTPTSPNCGKSKPR--PAEADMQLLETLCKEGDCSVDEVKNVYQSTFCALDLSVGLLGLOGLP 298
 Frog LKEPKYKALNGLPVNTPPSSRRSCNRNTRVSPQSETDSKVLEFLCSQNYCPMDEVKNVYSTSFVDLASAGISSNEGIP 289
 Human LKEPKYTAV--IPINGSPRTPRGQNSARIAKQLENDTRIIEVLCKEHECNTDEVKNVYFKNFIPEMNSLCLVTSMGLP 312

Zfish PMEALSKOYEELTHYSKDFDARLFLSDDETSPNKEIVSKVEVTPRKNLFAEDIAIPVPTAIRAAHTSIQLRGDLTSG 378
 Frog KVESISROYEELTHYSKDFDARLFLSDDETSPNKEIVSKVEVTPRKNLFAEDIAIPVPTAIRAAHTSIQLRGDLTSG 367
 Human EVENLSKRYEELTHYSKDFDARLFLSDDETSPNKEIVSKVEVTPRKNLFAEDIAIPVPTAIRAAHTSIQLRGDLTSG 392

Zfish SDQPSNLLVYKNTVDPSGETIKKVEELCEVFIQRFQAVGQCEGLGRKRFYLCALYYKVMESMLYSEKPLSVON 458
 Frog NQKPPDTLDSYFSNCTVAKTKITDRIEHFCHVFKEKFASSVGAAGAEICYOBYKLGVCCLYYVMEMALNTEERLSVHN 447
 Human SDQPSNLLVYKNTVDPSGETIKKVEELCEVFIQRFQAVGQCEGLGRKRFYLCALYYKVMESMLYSEKPLSVON 472

Zfish FSKLLNNAAFHTSLACALEVVIATTVGSSSLKNGGFRSSGASDSVESDLCPFWILSVFQLPAFDYKVVIESFIKAEPITL 538
 Frog FSKLLNNDIFHICLLACAVEVVMASVARN-----SQAYC-SSGTNLSFPWILRAFEIKAFDFYKVVIESCFIKAEPSL 518
 Human FSKLLNNDIFHMSLLACALEVVIATTVSRST-----SQN--LDSGTDLSFPWILNVLNLKAFDFYKVVIESFIKAEGNL 542

Zfish KHDVYKHELECEHVIMESLAWRADSPFLDLKCSRE-EGPGEQAEPPATLNQPLHHNHTAADLYLSVPVPCRQ----- 610
 Frog TSNMVKYLERCEHCEHVIMESLAWRADSPFLDLKCSRE-EGPGEQAEPPATLNQPLHHNHTAADLYLSVPVPCRQ----- 598
 Human TREYKHELECEHCEHVIMESLAWRADSPFLDLKCSRE-EGPGEQAEPPATLNQPLHHNHTAADLYLSVPVPCRQ----- 622

Zfish --P-PVMEAEPPTP--GTRAPRNSLSLFYKKLYRMAYLRUKMFSMLLTSHPMEPIIWTLLQHTLQNEYELMRDRHLD 685
 Frog TSSVTNGQVSSSQPVQ---QKSTLSLFYKKMYLLAYKRLSSLSLSDHPELEQVIWTLLQHTLQNEYELMRDRHLD 674
 Human NST-ANAETQATSAFQTKPLKSTLSLFYKKMYLLAYLRUNTLCERLSEHPELEHTIWTLLQHTLQNEYELMRDRHLD 701

Zfish QLIMSAMYATCKVKIMDLRFKTIIVTAYKELPNTNQETFKRVLIREGQYDSIIVFYNLVFMQKLKTNILQYSSPPPEPLSP 765
 Frog QIMYCSMYGICKAKKIDLRFKTIIVTAYKGLTNTNQETFKRVLIRDGQYDSIIVFYNLVFMQKLKSHILQYCSARHPTLSP 754
 Human QIMYCSMYGICKVKIMDLRFKTIIVTAYKDLPHAVQETFKRVLIRKEEYDSIIVFYNSVFMQKLKTNILQYASTPPPEPLSP 781

Zfish IPHIPSPYK--NSPLRVPCSNVYVSPLKSSRV-----SPLVITPRSRILISIGESFGSADKFOKINQVSSSDWSLK 837
 Frog IPHIPSPYRFGNSP-KVPC--NIYVSPKTPYKTADGLSPSKMTPKTSFLISLGETFRSPDRFOKINQVSSSDWSLK 831
 Human IPHIPSPYKFPSSPLRIPCGN-IYISPLKSPYKISEGLPTPTKMTPRSRILISIGESFGTSEKFOKINQVCSNDRVLK 860

Zfish RSLDGGSA PKPLKRLRFDMDGQDEADGSKS-SGESALIQKLAENSTSTRMQCKLKEESDKDHPPEP. SEQ ID NO: 1 904
 Frog RSADTGTTPKPLKRLRFDMDGQDEADGSKHIGESKFOQKLAENSTSTRMQCKLKEESLESSQOEK SEQ ID NO: 2 899
 Human RSAEGSNPPKPLKRLRFDIEGSDADGSKHLPGESKFOQKLAENSTSTRMQCKLMNDSMDTSNKEK SEQ ID NO: 3 928

FIG. 11

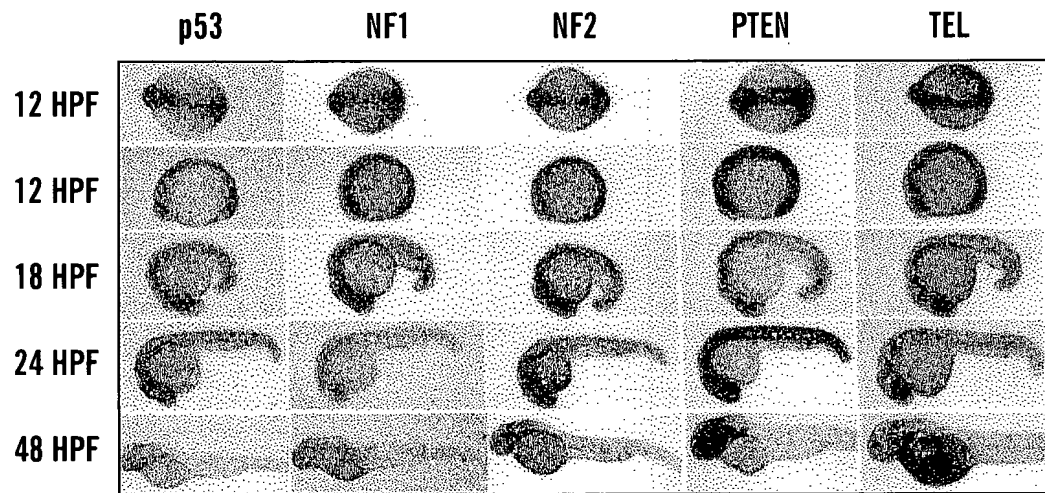


FIG. 12

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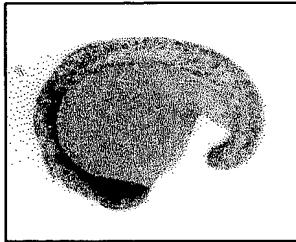


FIG. 13A

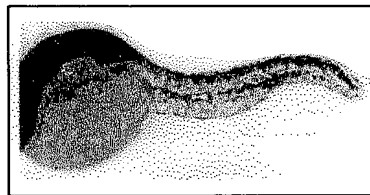


FIG. 13B

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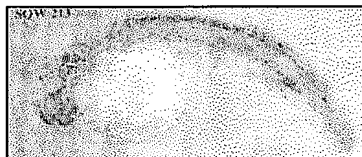


FIG. 13C

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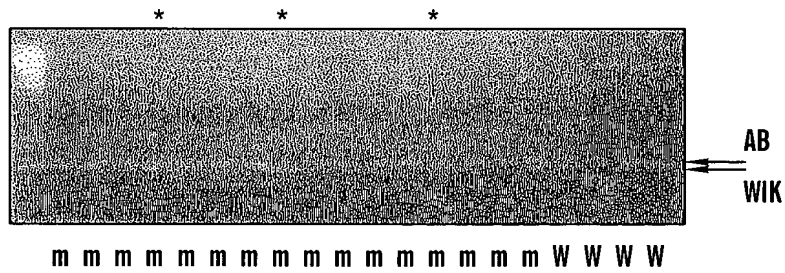
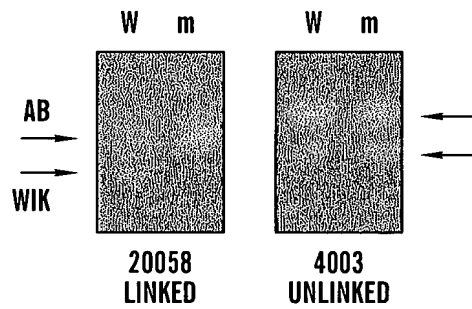


FIG. 14

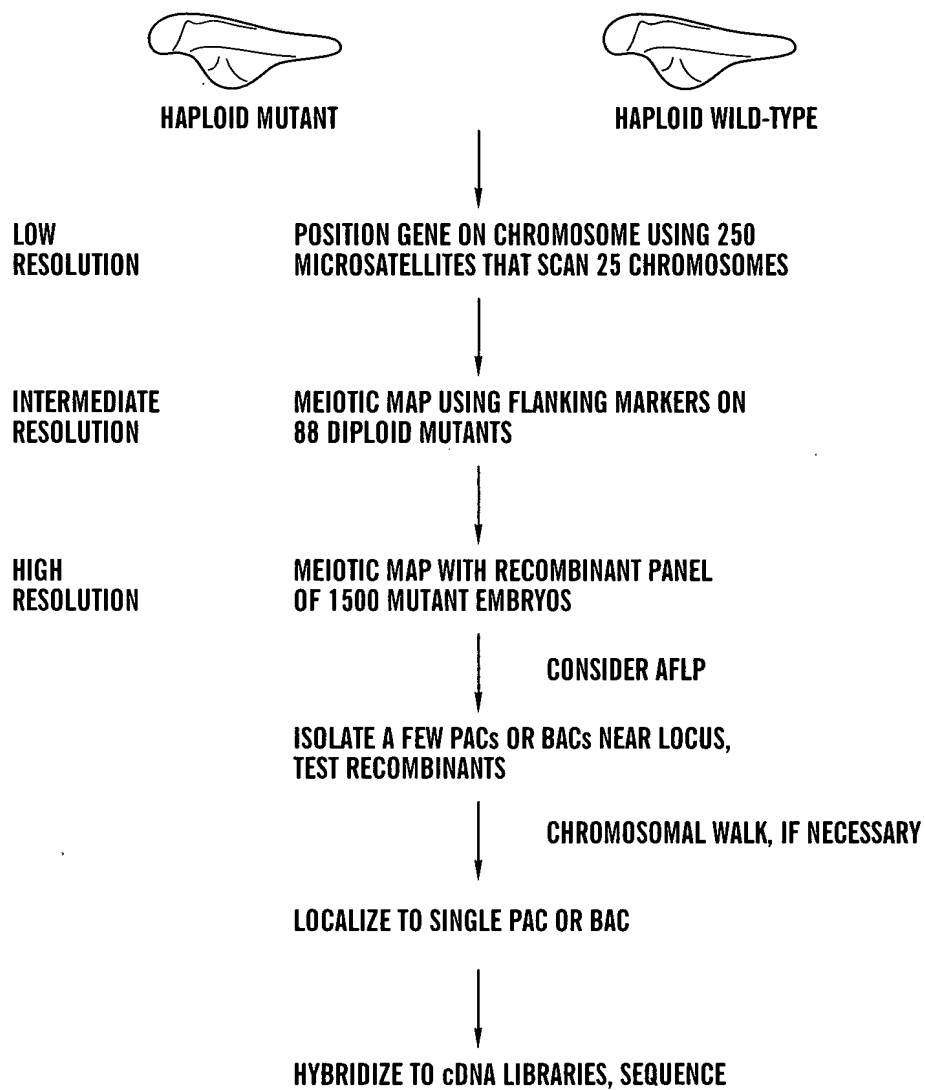


FIG. 15

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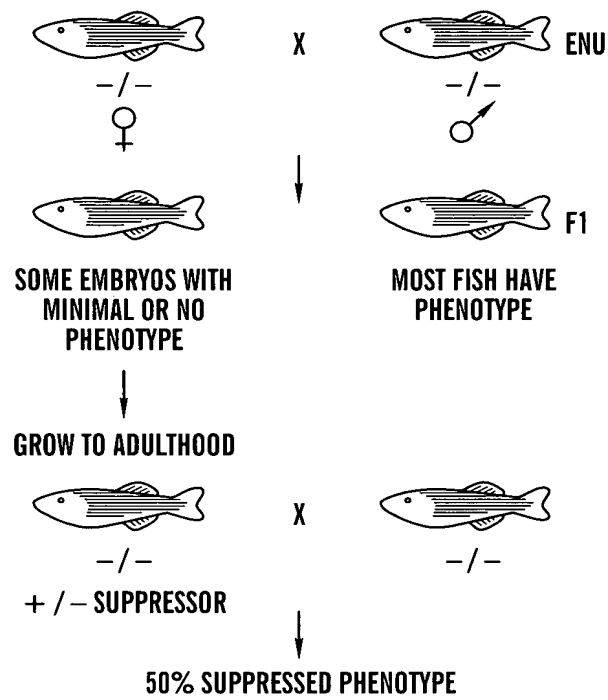


FIG. 16A

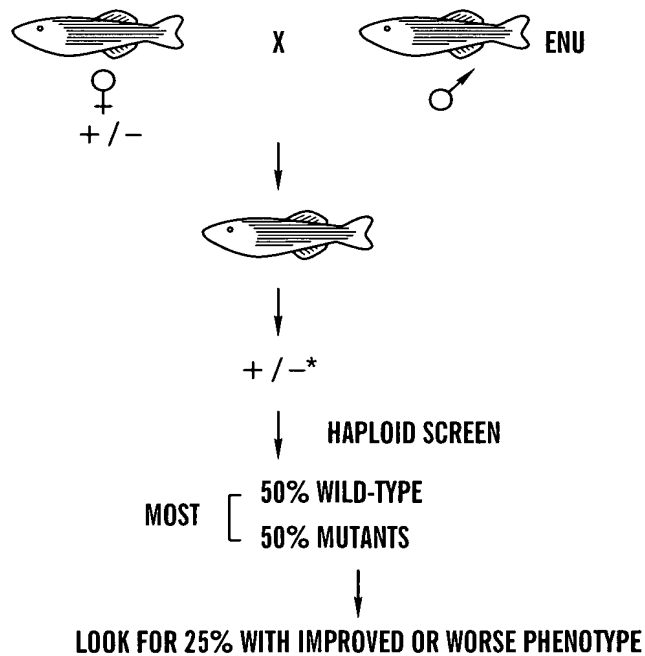


FIG. 16B

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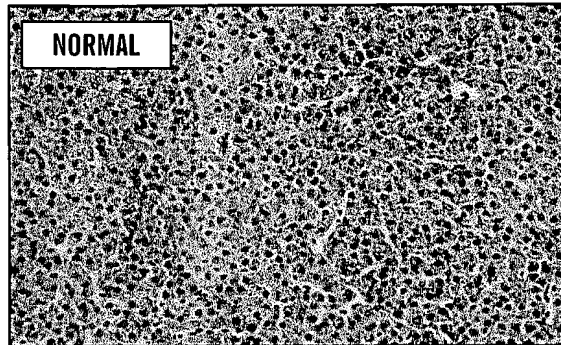


FIG. 17A

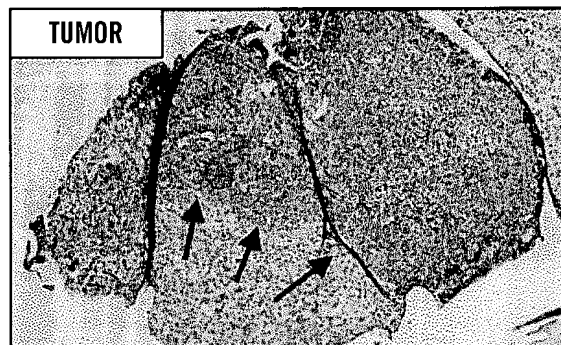


FIG. 17B

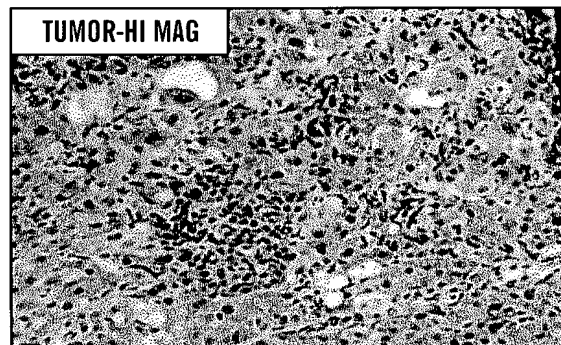


FIG. 17C

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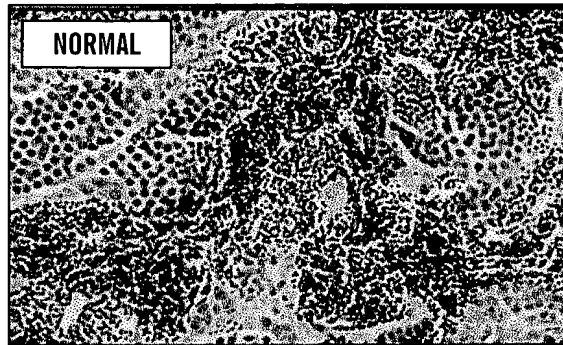


FIG. 18A

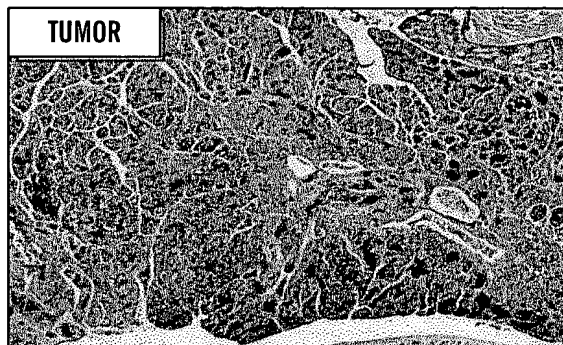


FIG. 18B

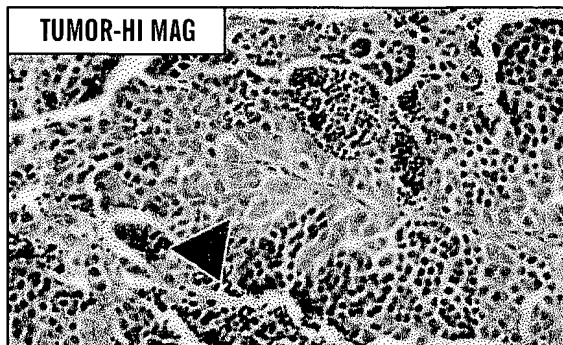


FIG. 18C

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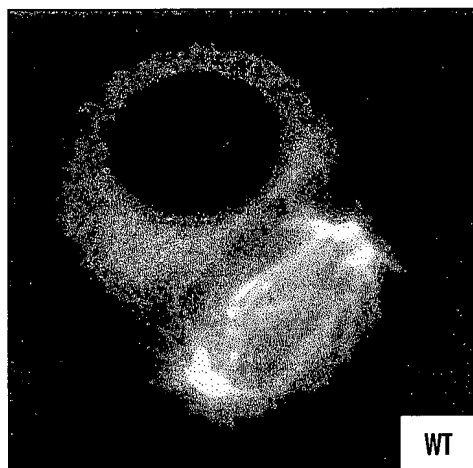


FIG. 19A

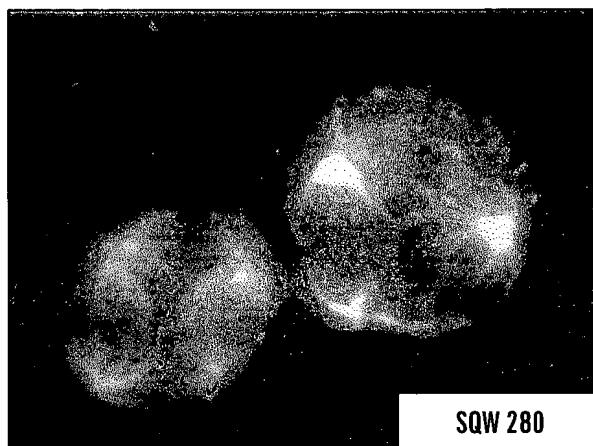


FIG. 19B

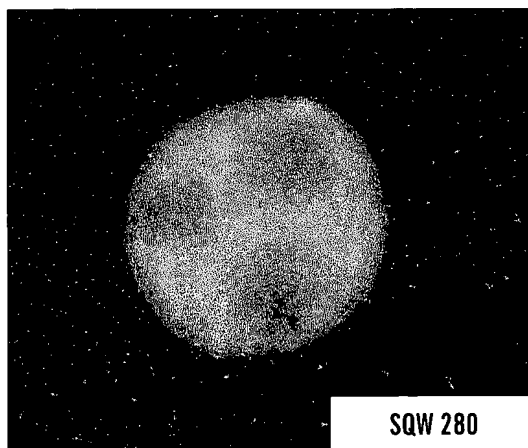


FIG. 19C

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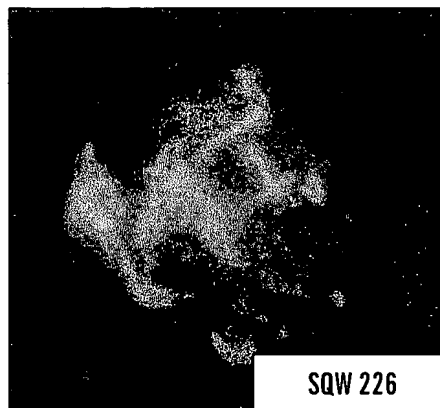


FIG. 19D

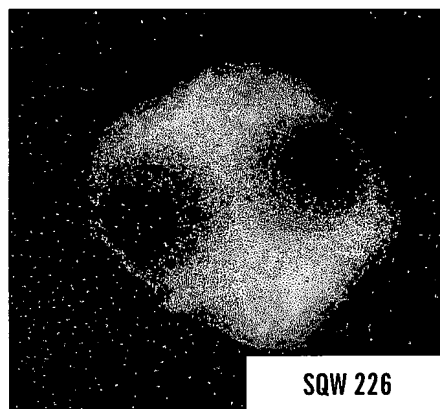


FIG. 19E

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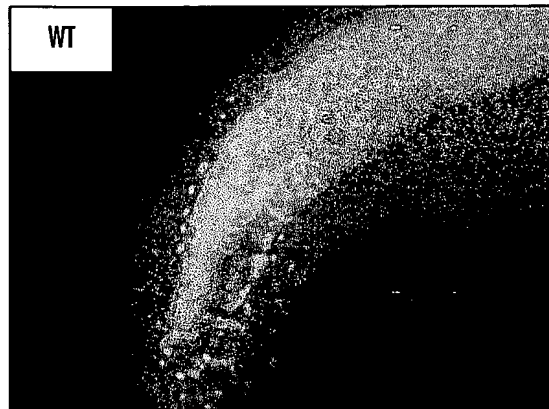


FIG. 20A

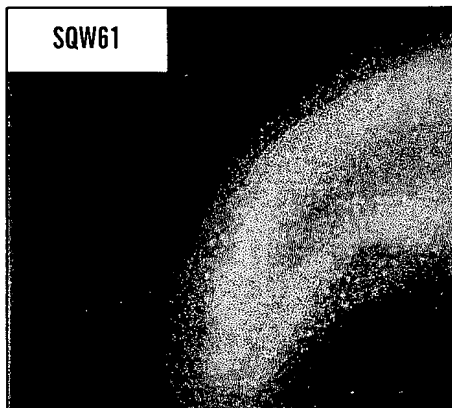


FIG. 20B



FIG. 20C

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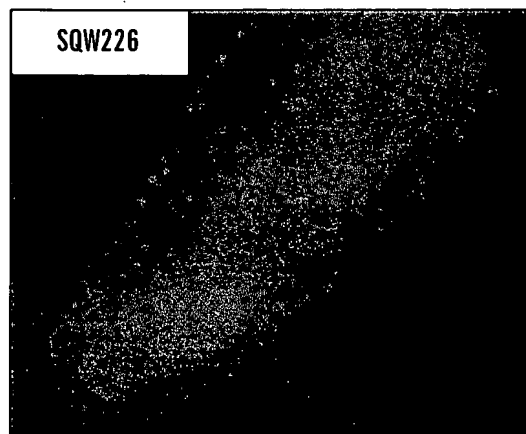


FIG. 20D

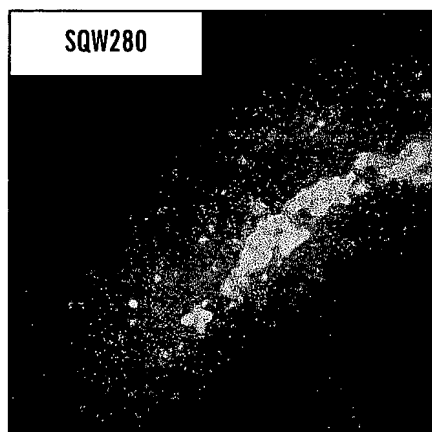


FIG. 20E

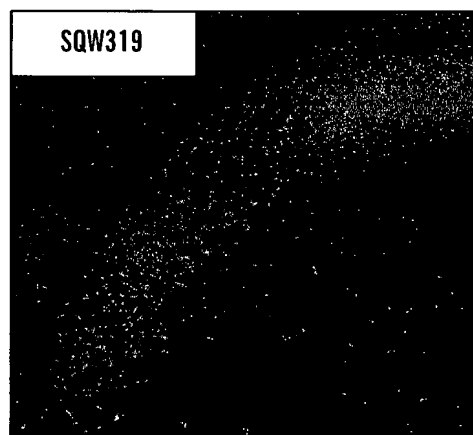


FIG. 20F

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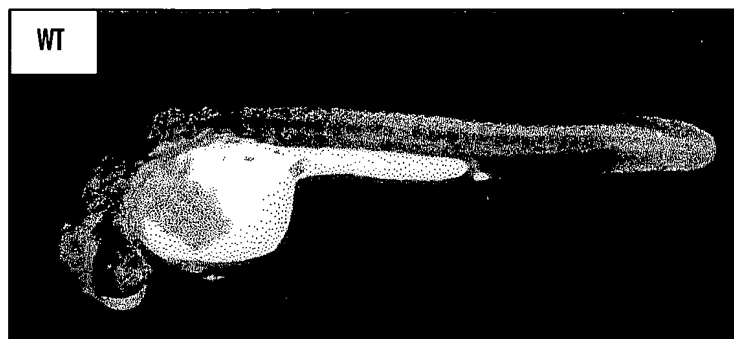


FIG. 21A

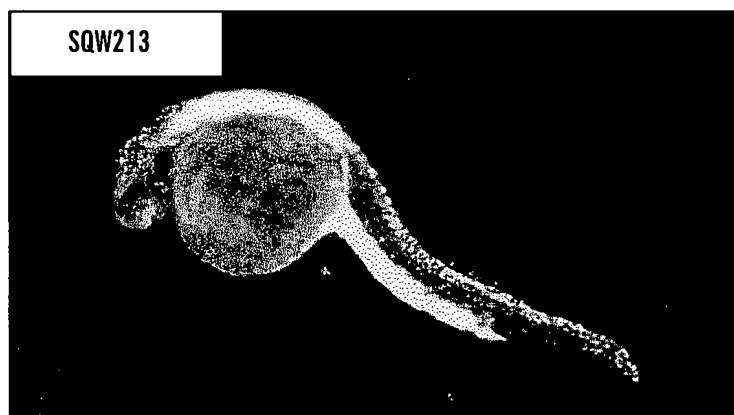


FIG. 21B



FIG. 21C

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SQW61



FIG. 21D

SQW226

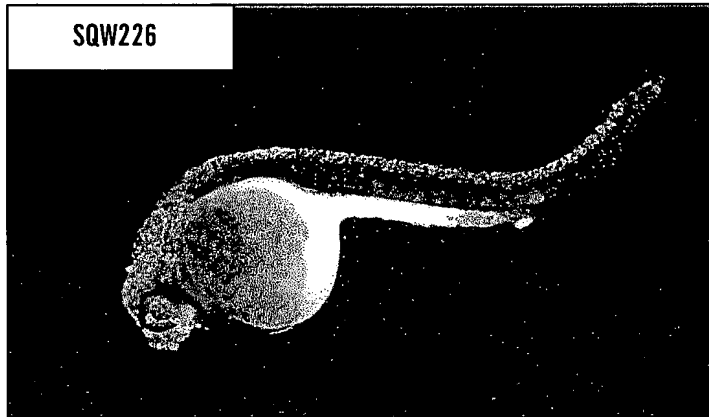


FIG. 21E

SQW319

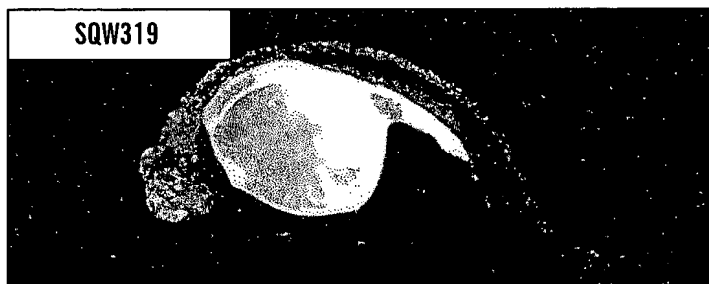


FIG. 21F

09758007 "06.11.01